

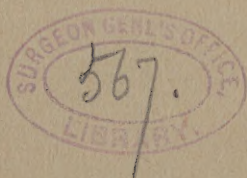
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THE SEQUELÆ OF SYPHILIS
AND THEIR TREATMENT.
NASAL SEQUELÆ.

BY
CHARLES H. KNIGHT, M.D.

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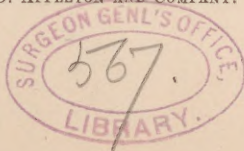
THE SEQUELÆ OF SYPHILIS AND THEIR TREATMENT. NASAL SEQUELÆ.*

BY CHARLES H. KNIGHT, M. D.

THE topic for discussion which has been assigned to me is the sequelæ or late manifestations of syphilis as met with in the nasal passages. My paper will therefore not enter upon the question of primary infection in this region or consider the possibility of so-called secondary lesions developing upon the Schneiderian membrane. Medical literature contains the record of many cases of chancre of the nose, and at the present day we believe that the mucous patch may appear on the nasal mucosa, although its occurrence here is very rare and has been denied. Late syphilis of the nose may simulate almost any other lesion, simple or malignant; its development is extremely insidious, and its ravages may be very extensive. For these reasons the study of specific phenomena, as exhibited in the nasal chambers, is peculiarly interesting, and their early recognition is of the utmost importance. To illustrate, let me briefly re-

* Read before the American Laryngological Association at its eighteenth annual congress.

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cite to you a personal experience, by no means a rare one—and doubtless each of you could furnish a counterpart from his own observation—but to me it was full of instruction and warning:

In the year 1890 a girl of fifteen was brought to the Manhattan Eye, Ear, and Throat Hospital for epiphora from stenosis of the nasal duct. The duct was found to be obstructed at its nasal orifice by an enormous enlargement of the right inferior turbinated body, which completely blocked up the nostril and was adherent to the septum. The mass, supposed to be a simple hyperplasia, was removed with the cold-wire snare. In two weeks it had resumed its original proportions, but was much more sensitive and vascular. Malignancy was suspected, but the microscope discovered nothing except hypertrophy of the lymphoid elements in the mucous membrane, which resembled, in all respects, lymphoid tissue as met with in the nasopharynx. Again it recurred after removal, and in about three weeks the microscopic report became quite different. Now the case was put down as one of small round-celled sarcoma. All the characteristics of sarcomatous tissue were clearly defined. The patient was referred to a general surgeon, who advised excision of the upper jaw. Ten days later the girl came to the clinic complaining of a sensitive swelling on her left shin, and over the crest of the tibia was found a semi-fluctuating tumor of the size of a hen's egg. She was at once put upon mercury and rapidly increasing doses of iodide of potassium. Within two weeks this node, and at the same time the nasal tumor, disappeared, and there has been no sign of either since. She was kept under treatment several months and has been seen at the clinic within a year. There can be no doubt, therefore, that the nasal tumor was a gummatous infiltration, yet the case narrowly escaped going on record as one of sarcoma cured by excision of the upper jaw. At the outset the patient, as well as her relatives, was closely questioned as to the possibility of specific taint. Her his-

tory, her social position, and her appearance were above suspicion. The ultimate result must be considered more fortunate than it is in many similar cases, no damage being done beyond complete absorption of the inferior turbinated body.

The foregoing is a fair example of the course and results of a syphilitic process limited to the soft parts, and of the difficulty in reaching a diagnosis. We meet with a still more serious array of symptoms and much more formidable consequences when the sæptal cartilage is attacked or the bony framework of the nose is involved. In the former case a patient presents himself with a symmetrical swelling of the partition between the nostrils well forward, usually pale in color, and insensitive, as compared with a perichondritis from traumatism. The surface is frequently irregular, eroded, or even ulcerated, and bleeds readily on irritation. The amount of discomfort attending the condition depends almost exclusively upon the degree of nasal stenosis and not upon the acuteness or intensity of the process itself. The result in such a case is almost inevitable—namely, perforation limited only by the extent of the primary infiltration. In some cases such an accident may be prevented by vigorous treatment, but they are rare, and probably include only those seen early and those in which the gummatous perichondritis is rather circumscribed. It by no means follows that all cases of perforation of the cartilaginous sæptum should be regarded as syphilitic. On the contrary, a large percentage of them are traumatic; in other words, they are induced by the habit of picking the nose for the purpose of dislodging a mass of inspissated secretion, which is apt to accumulate at the apex of a sæptal spur or over an area of atrophied mucous membrane. Such perforations are often found in indi-

viduals who are entirely ignorant of their existence, and from whom a syphilitic element may be positively excluded. It may be said of syphilitic perforations that they tend to ulcerate at their margins and gradually invade the columna, the tip, and alæ of the nose, or progress backward and involve the bony sæptum. In this way a large part of the skeleton of the nose may be destroyed, but if the ulcerative process be confined to the cartilage and do not creep to the margin of the nostril, little or no external deformity may result. I have in mind a case in which the cartilage and the columna were lost, and yet no disfigurement followed except a slight flattening of the tip of the nose, the loss of the columna being noticeable only when the head was thrown backward. The most effective method of arresting these ulcerations is by daily applications of chromic acid or nitrate of silver, in solution of twenty grains to the ounce and upward, according to the extent and activity of the process. The formation of hard crusts, which are a source of irritation as well as of foetor, may be prevented by the frequent use of a spray of albolene containing ten drops of eucalyptol to the ounce. Of course, suitable constitutional treatment must not be neglected.

In a certain proportion of cases the disease seems to be primarily located, not in the soft tissues, but in the cartilage or bone itself, and by the time the patient applies for relief the process of destruction has been practically completed. Almost all the bones which compose the walls of the nasal fossæ may be attacked by a necrotic process due to syphilis. A hideous degree of deformity may result from loss of the bony supports of the external nose and from distortion caused by cicatricial contraction. In dealing with cases of this kind we have

to decide first when and how to remove necrosed bone, and finally how to remedy the resulting deformity. As to the time of interference, it may be said that it is not always good policy to wait until the sequestra have become completely detached. The process of spontaneous separation is notably slow in syphilitic necrosis, and should be expedited, when feasible, by surgical means, shortly after the active symptoms have been controlled by treatment. It is, of course, very desirable to preserve as much tissue as possible, hence the importance of having the patient fully under the influence of specific remedies for a considerable time before resorting to surgical interference. Otherwise, tissues which should be saved may be injured or destroyed. Not infrequently the diseased bone disintegrates and is expelled in the act of blowing the nose. At times fragments may be found lying free in the nasal fossa, whence they may be extracted through the anterior naris; or if their size or irregular shape prevents their removal by that way they may be pushed back into the pharynx and withdrawn through the mouth. It sometimes happens that a sequestrum is so large that the nasal orifices will not permit its passage, or so hard that it can not be broken up and removed piecemeal. Under such circumstances we may have recourse to the operation described by Rouge in 1873. In this method the soft parts, including the external nose, are detached by an incision along the gingivo-labial furrow and a dissection carried upward close to the bone until the nares are freely exposed. If necessary, additional space may be gained by chipping off with bone forceps the osseous margins of the *introitus nasi*. My first opinion of Rouge's incision * has

* *Medical News*, Philadelphia, January 3, 1891.

been confirmed on several recent occasions—namely, that it is especially adapted to cases of syphilitic necrosis, in which the size and shape of the sequestrum preclude its removal by the natural passages without extreme pain to the patient and damage to the soft parts.

The diagnosis of necrosis is seldom difficult. The characteristic odor of syphilitic ozæna is conclusive, but if need be may be confirmed by the exploring probe. It is not always easy to determine precisely what and how many bones may be affected, especially in cases of long standing. The landmarks may be so effaced by inflammatory thickening and cicatricial contraction that the parts can hardly be identified. Bone exposed by ulceration can not always be readily differentiated from dead bone. Hence the importance of rapidly getting the patient under the influence of internal medication. The parts should be kept clean by means of detergent sprays or douches. The fœtor may be modified, but can not be wholly corrected while the dead bone is retained. Yet attempts at its removal, unless its position and extent can be clearly made out, are unwise so long as the sequestrum is quite immovable, or if it be located high up in the nasal chambers near the os planum or the cribriform plate. The blind use of the drill or the burr, especially in the ethmoid region, can not be too strongly condemned. Exuberant granulations often spring up from the margins or base of an ulcer, and one may be tempted to reduce them with caustics or a curette. At times this may be necessary, but a wise conservatism in the use of destructive agents is to be recommended. I have never seen a genuine polyp in a case of nasal syphilis, except in one giving a clear antecedent history of nasal polypi.

In considering the question of relieving nasal deformity resulting from syphilis it is not my purpose to take up the subject of plastic surgery, or to refer to all the ingenious devices by which nasal defects may be remedied. Quite extensive loss of the external nose may be repaired after a fashion by flaps taken from the forehead, the cheeks, or other parts of the body. Very remarkable success in counterfeiting a natural nose has been attained by the use of celluloid and other materials. I wish only to recall to your attention a method of overcoming the deformity known as "saddle nose," which results from more or less destruction of the cartilaginous and bony supports of the nose. It is not only a source of mortification to its victim, but may debar him from society as well as from employment. The unfortunate is generally glad to try any measure which may make him more presentable and enable him to gain a livelihood. The method referred to was first suggested by Létievant, and consists of inserting beneath the depressed nose a supporting framework of metal. Alumi-

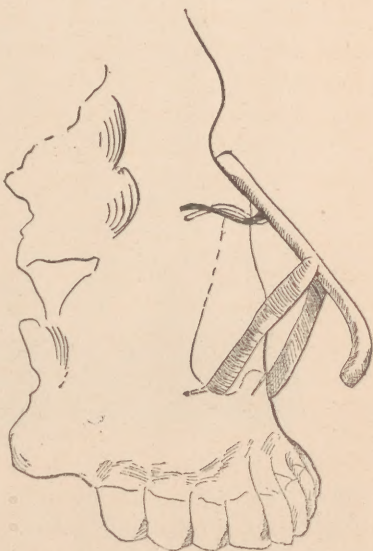


FIG. 1.—The Martin bridge as used by Weir.

num was first used, and subsequently C. Martin,* of Lyons, made an artificial bridge of platinum, with lateral arms, to be imbedded in the superior maxilla on either side (Fig. 1). The latter was introduced into this country by Dr. R. F. Weir † in 1892. The length and shape of the bridge and of the arms must be adapted to each



FIG. 2, a.—Before operation.

individual case. The one here shown was worn by a patient for seven months and was then replaced by a larger one. The bridge is put in place through a Rouge incision, already referred to. Although the operation is comparatively free from risk, it is oftentimes very tedi-

* *La prothèse immédiate*, Paris, 1889.

† *New York Medical Journal*, October 22, 1892.

ous, since great care must be employed in determining the dimensions of the apparatus and in properly fixing the ends of the supporting arms in the maxilla. In spite of the utmost precautions, the bridge sometimes becomes distorted, or its upper end erodes the overlying skin. Both of these accidents happened in the patient whose



FIG. 2, *b*.—Six weeks after the insertion of the bridge.

photograph is shown, and the bridge had to be removed (Fig. 2). At first the result appeared to be perfect, but after a few weeks the bridge seemed to become twisted out of place, the skin over the dorsum of the nose began to grow red and sensitive, and the plate threatened to penetrate. To prevent this disaster the arms were divid-

ed with bone-cutting forceps and the plate was withdrawn through the nostril. Notwithstanding this procedure, the skin ulcerated, and in process of repair a puckered cicatrix rather added to the patient's disfigurement. Moreover, the retraction of cicatricial bands within the nose so obstructed the passage that their repeated division with the cautery knife became necessary to give adequate breathing space. A month ago I inserted another bridge in this case, similar to the one here shown, and up to the present time there has been no unfavorable symptom. The first operation on this patient was performed six years after his infection with syphilis, of which the early symptoms were meagre, and for which he never had any treatment until he came to the hospital. His urgent desire for relief from his deformity led me to operate, as I now believe, prematurely. Since the failure of the first attempt he has had thorough and prolonged medication, and, in consequence, is in so much better condition that a good result may be expected. We have had a number of cases at the Manhattan in which this operation was undertaken by Dr. Hopkins, Dr. Nichols, Dr. McKernon, and myself, but except in three or four the permanent results have not been fully satisfactory. Nevertheless, I am inclined to believe that the failures have been due to faults of technics and selection of an improper time for operating, especially as regards the date of infection, and should not detract from the merits of the method. Dr. McKernon has two patients who have been wearing the bridge nearly two years with perfect comfort and complete relief of deformity. Dr. Weir informs me that in his best case the patient has retained the splint four years, but he has had several which were less successful.

He considers it a good operation for cases in which the septum is entirely destroyed and there is no obstacle to drainage. Dr. C. A. Powers, of Denver, writes me that all of his three cases behaved well so long as they were under his observation. One patient retained the bridge about eighteen months. She was a syphilitic and finally died of tuberculosis. Another was a very complicated case in which an ala had to be formed from the cheek. On about the tenth day the bridge slipped and had to be readjusted. Neither of these cases, therefore, can be considered thoroughly favorable for operation. The third case was lost sight of in four months, meanwhile the bridge having been worn without objection. Dr. John A. Wyeth has used a platinum bridge in three cases. In two of these an armless bridge, which will be referred to later, was inserted. In one case in which a Martin bridge was introduced "the deformity was very greatly relieved, the patient was much more comfortable, and went home comparatively happy." At the end of eight months it was displaced by a blow and had to be removed. Dr. Wyeth counts this case as only a "partial success," although, until receipt of the injury, the bridge was entirely satisfactory. A case of operation by Dr. Emil Heuel, to whose courtesy I am indebted for the particulars, is an example of remarkably extensive necrosis due to syphilis of twelve years' standing, as well as of primary failure and final success of the platinum bridge. The nasal bones, vomer, lower half of the left, and a portion of the right superior maxillary bones, the ethmoid, the right lacrymal bone, and the superior, middle, and inferior turbinated bones had all been destroyed. The left incisor, canine, and bicuspid teeth were missing,

and both maxillary sinuses were exposed. Three years ago a platinum bridge was put in, but it had to be removed in about six months on account of the irritation it excited. This patient has been wearing a bridge, modified by Dr. Heuel, for the last two years and a half without annoyance, and the case is considered successful.

My experience with the platinum bridge leads me to insist upon three points: 1. In syphilitic cases the patient must have had a thorough course of treatment, and a sufficient period must have elapsed since the disappearance of active symptoms—not less than three years. 2. The dissection of the soft parts must be so extensive as to obviate the possibility of tension at any point, and especially over the bridge of the nose where the upper end of the plate is to rest. 3. The metal bridge must be so molded and smoothed down at its edges as to preclude the danger of friction and pressure upon the soft parts, and the ends of the supporting arms must be deeply buried in the maxilla, as otherwise they are liable to be dragged out of position. The tendency to retraction and collapse of the nostril, observed in some cases, may be prevented by giving considerable width to the arms at their line of junction with the plate. The cost of the platinum bridge, as originally made, which is an item of some importance in the class of patients usually needing this kind of attention, may be considerably reduced by having it cut from a single piece of metal (Fig. 3). This idea, suggested by Dr. F. E. Hopkins * and first put in practice by him at the Manhattan, was found to be satisfactory. The bridge should be partially shaped beforehand and may be trimmed to suit the case at the time of operation. The after-treatment of operative

* *New York Medical Journal*, June 8, 1895.

cases should be very simple, consisting merely of an application to the external nose of a piece of lint soaked in boric-acid solution. On the fourth day, and daily thereafter, a warm intranasal douche of a similar solution may be carefully used. No sutures are needed in replacing the lip, and

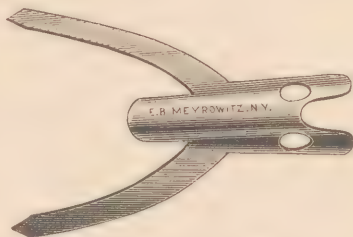


FIG. 3.—Hopkins's bridge.

no bandages or dressing which may exert pressure should be applied. The patient should be cautioned to avoid talking and laughing, and for a week should be restricted to semifluid diet. In other words, the parts should be kept at rest as far as possible until the process of repair is well advanced and the tissues have become accustomed in a degree to the presence of the foreign body.

In conclusion, let me refer briefly to a series of experiments with an "armless" bridge in a class of cases in which only partial destruction of the cartilage has resulted in moderate sinking in of the nose. In two of Dr. Wyeth's cases this form of bridge was inserted through a median incision over the dorsum of the nose. In one suppuration occurred and the plate had to be removed. In the other the external wound healed without suppuration and without scarring, and the bridge is still in place. It seemed to me it might be possible to put a simple plate of metal under the skin, a bed having been prepared for it by a dissection carried on through the nostril. Such was found to be the case,

but the behavior of the plate was rather surprising. The deformity was corrected, the foreign body excited no disturbance, but in a few weeks it became evident that the plate was cutting its way through the columna. It was removed, and one having numerous perforations was introduced, in the hope that the penetration of granulations would furnish a sort of anchorage for the metal. The latter pursued a similar course, although its weight was hardly appreciable. It is possible that better success will attend a further trial of this plan, provided some other material, such as celluloid or vulcanite be used, or the metallic plate be made much thicker, especially at its lower end. Permanent improvement in the contour of the nose ensued even in those cases in which the bridge was retained only a few weeks. The obvious advantages of this method are that it not only dispenses with an external wound, but substitutes for a long and troublesome operation, necessitated by the use of the Martin bridge, one of comparative simplicity, which may be performed in a subject of average fortitude under local anæsthesia.

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